

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended): A method for control of an automatic transmission ~~[[ (3) ]]~~ of a vehicle provided with an engine ~~[[ (2) ]]~~ that drives the transmission ~~[[ (3) ]]~~, ~~in which method comprising:~~

~~[[ - ]]~~ ~~detecting~~ a downhill-travel situation of the vehicle ~~is detected and;~~

~~[[ - ]]~~ ~~a transmission ratio is chosen such that the engine (3) absorbs energy;~~

~~characterized in that~~ storing a longitudinal speed ( $V_{min}$ ) at ~~[[ the ]]~~ a beginning of downhill travel is stored the downhill-travel situation in a memory ~~when the vehicle begins a downhill-travel situation and;~~

~~[[ - ]]~~ ~~as long as the vehicle is in~~ during the downhill-travel situation, comparing ~~[[ the ]]~~ a current speed ~~[[ (V) ]]~~ of the vehicle ~~is compared~~ with the speed ( $V_{min}$ ) at the beginning of downhill travel in such a way that: the downhill-travel situation; and

based on the comparing, choosing a transmission ratio such that the engine absorbs energy, comprising ~~[[ - ]]~~ instructing the transmission to initiate downshifting if the current speed ~~[[ (V) ]]~~ exceeds the speed ( $V_{min}$ ) at the beginning of ~~downhill travel~~ the downhill-travel situation by a predetermined deviation ~~[[ (VS) ]]~~, ~~the transmission is then instructed to initiate downshifting~~

wherein the detecting the downhill-travel situation includes detecting whether a brake is applied via a brake pedal and, when the brake is applied, the downhill-travel situation is not detected.

2. (Currently Amended): A control method according to claim 1, ~~characterized in that~~ wherein the downhill-travel situation is detected if ~~[[ the ]]~~ a slope ~~[[ (P) ]]~~ on which the vehicle is traveling is greater than a predetermined threshold slope ( $PS$ ), ~~if the power demand ( $A_{ee}$ )~~

~~of the engine is smaller than a predetermined power threshold (AccS), and braking is absent.~~

3. (Currently Amended): A control method according to claim 1, ~~characterized in that it includes an additional test step (28)~~ further comprising:

verifying that, before the downshifting is initiated, ~~[[the]]~~ an energy-absorption capacity of the engine is smaller than a predetermined power threshold.

4. (Currently Amended): A control method according to claim 3, ~~characterized in that~~ wherein the ~~absorption~~ energy-absorption capacity of the engine is determined by ~~[[the]]~~ an engine speed (NTA).

5. (Currently Amended): A control method according to claim 3, ~~characterized in that~~ wherein the ~~predetermined power~~ threshold (NS) of power absorption capacity is an increasing function of ~~[[the]]~~ a slope ~~[[P]]~~ on which the vehicle is traveling.

6. (Currently Amended): A control method according to claim 1, ~~characterized in that~~ wherein the deviation ~~[[VS]]~~ from ~~predetermined~~ the speed at the beginning of the downhill-travel situation is between 5 and 10 km/h.

7. (Currently Amended): A control method according to claim 1, ~~characterized in that~~ wherein the vehicle is equipped with a speed-governing system.

8. (Currently Amended): A system for control of an automatic transmission ~~[[3]]~~ of a vehicle provided with an engine ~~[[2]]~~ that drives the transmission ~~[[3]]~~, ~~the system being provided with~~ comprising:

an electronic unit configured to:

~~[[ -]] means for identifying~~ identify a downhill-travel situation of the vehicle,

~~[[and]]~~

~~[[ -]] means for choosing a transmission ratio so that the engine absorbs energy,~~

~~characterized in that it is additionally provided with:~~

~~[[ -]] means for measuring and storing~~ measure and store in a memory ~~[[the]]~~ a longitudinal speed ( $V_{min}$ ) ~~when the vehicle begins a~~ at a beginning of the downhill-travel situation,

~~[[ -]] means for comparing the~~ compare a current speed ~~[[ (V) ]]~~ of the vehicle with the speed ( $V_{min}$ ) at the beginning of ~~downhill travel~~ the downhill-travel situation, and~~[[;]]~~

~~[[ -]] means for instructing~~ instruct the transmission to initiate downshifting if the current speed ~~[[ (V) ]]~~ exceeds the speed ( $V_{min}$ ) at the beginning of ~~downhill travel~~ the downhill-travel situation by a predetermined deviation ~~[[ (VS) ]]~~,

wherein the electronic unit does not identify the downhill-travel situation if a brake is applied via a brake pedal.

9. (Currently Amended): A vehicle, comprising:

~~provided with~~ an engine;

~~[[and]]~~ an automatic transmission~~[[,]]~~ driven by the engine; and

~~characterized in that it is provided with~~ the system according to claim 8 ~~[[for]]~~ to control ~~[[of]]~~ the automatic transmission.

10. (New): A control method according to claim 1, wherein the downhill-travel situation is not detected if an accelerator pedal is depressed such that a power demand of the

engine is larger than a predetermined power threshold.

11. (New): A system according to claim 8, wherein the electronic unit is configured to verify that, before the downshifting is initiated, an energy-absorption capacity of the engine is smaller than a predetermined power threshold.

12. (New): A system according to claim 11, wherein the energy-absorption capacity of the engine is determined by an engine speed.

13. (New): A system according to claim 12, further comprising:  
an engine controller configured to measure the engine speed.

14. (New): A system according to claim 11, wherein the predetermined power threshold is an increasing function of a slope on which the vehicle is traveling.

15. (New): A system according to claim 8, wherein the electronic unit does not detect the downhill-travel situation if a power demand of the engine from an accelerator pedal being depressed is larger than a predetermined power threshold.